

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A method of performing magnetic resonance imaging (MRI) on ~~a volume of tissue of~~ a patient having an implantable medical device (IMD) with a telemetry unit communicating timing information as to operational conditions of the IMD, comprising:
 - receiving the timing information communicated from ~~[[an]] the implantable medical device (IMD);~~
 - applying a plurality of discrete MRI electromagnetic radiation bursts to the volume of tissue of the patient, wherein said applied radiation bursts are synchronized with operational conditions of the IMD based upon the received timing information received;
 - imaging the volume of tissue upon a display, whereby the imaged tissue being imaged is placed is displayed in a substantially common state during each of said plurality of radiation bursts.
2. (Currently amended) ~~The A method according to~~ claim 1, further comprising sensing cardiac activity with the IMD and wherein the timing information includes timing of sensed cardiac activity conditions measured by the IMD on a beat-by-beat basis, and wherein the volume of tissue comprises myocardial tissue.
3. (Currently amended) ~~The A method according to~~ claim ~~[[2]]~~ 1, further comprising sensing physiologic conditions of ~~a~~ the patient with the IMD.
4. (Currently amended) ~~The A method according to~~ ~~of~~-claim 1, further comprising applying cardiac pacing pulses using the IMD and wherein the timing

information defines [[a]] timing of cardiac pacing stimulation pulses applied to athe patient by the IMD.

5. (Currently amended) The A method according to ~~of claim~~ [[2]] 14, further comprising:

stimulating a patient with the IMD based upon a plurality of different the timing information to produce, wherein the plurality of different timing information produces a plurality of different a specified cardiac activity rhythm;

imaging the myocardial heart tissue defines a based on the timing of the plurality of different timing information during application of the stimulation applied to the patient by the IMD; and

at least one of storing and displaying at least some of said plurality of images when the myocardial heart tissue is at common points during the produced cardiac rhythm.

6. (Currently amended) The method of claim 5, ~~further comprising stimulating the patient with the IMD wherein at least one of said plurality of different stimulation based on the timing information is intended to induce an arrhythmia during the MRI.~~

7. (Previously presented) The method of claim 1, wherein the IMD is a pacemaker and wherein the timing information defines a timing of a cardiac cycle.

8. (Previously presented) The method of claim 1, wherein performing the MRI includes applying one or more electromagnetic radiation bursts based on the timing information.

9. (Previously presented) The method of claim 1, wherein performing the MRI includes applying one or more gradient magnetic fields based on the timing information.

10. (Currently amended) A method of performing magnetic resonance imaging (MRI) on a patient ~~having~~ stimulated by an implantable medical device (IMD) with having a telemetry unit communicating stimulation timing information ~~as to operational conditions of the IMD~~, comprising:

~~stimulating a patient with an implantable medical device the (IMD) with a plurality of different based upon the stimulation timing information sets;~~

~~communicating transmitting the operating stimulation timing information indicative of a the plurality of different timing information sets of the stimulation from the IMD;~~

~~receiving at an MRI device the stimulation operating stimulation timing information transmitted communicated from the IMD; and~~

~~responsive to receipt of the timing information by the MRI device, applying MRI a plurality of electromagnetic radiation bursts from the MRI device to the patient synchronized with the timing information sets of the stimulation of the patient based upon the received timing information, whereby tissue being imaged is placed in a substantially common state during each common one of said plurality of electromagnetic bursts.~~

11. (Currently amended) The method of claim 10, further comprising:

sensing conditions of the patient with the IMD;

communicating ~~sensed conditions~~ sensing timing information indicative of the sensed conditions to the MRI device; and

applying the MRI radiation bursts to the patient synchronized with the ~~timing of one of the stimulation timing information and the sensed conditions~~ sensing timing information.

12.-18. (Canceled)

19. (Cancelled)

20. (Cancelled)

21.-25. (Cancelled)

26. (Currently amended) An apparatus comprising:

means for receiving ~~a plurality of different~~ timing information from an cardiac-based implantable medical device (IMD) related to timed operating conditions of the IMD;

means for performing magnetic resonance imaging (MRI) ~~of a volume of myocardial heart tissue by applying electromagnetic radiation bursts based upon the plurality of different received timing information;~~ and

means for synchronizing application of electromagnetic radiation bursts with ~~the plurality of different received timing information~~ timed operating conditions of the IMD, whereby the volume of myocardial heart tissue being imaged is placed in a substantially common state during each application of radiation burst that is based upon a common one timing information of said plurality of different timing information.

27. (New) ~~The~~ An apparatus according to ~~of~~ claim 26, wherein the IMD comprises means for sensing cardiac activity wherein the timing information includes timing of sensed cardiac activity.

28. (New) ~~The~~ An apparatus according to ~~of~~ claim 26, wherein the IMD comprises means for applying cardiac stimulation pulses and wherein the timing information defines timing of cardiac stimulation pulses applied to ~~a~~ the patient by the IMD to produce a specified cardiac rhythm.

29. (New) ~~The~~ An apparatus according to ~~of~~ claim ~~28~~4, wherein the MRI comprises:

means for imaging the cardiac tissue during application of the cardiac stimulation by the IMD ~~defines a~~ based upon the timing information; and

means for storing and displaying a plurality of images taken during common points during the produced cardiac rhythm.

30. (New) The apparatus of claim 29, ~~further comprising stimulating the patient with the IMD wherein~~ cardiac stimulation based on the timing information ~~is adapted to induce an arrhythmia during the MRI.~~

31. (New) The apparatus of claim 26, wherein the IMD comprises a pacemaker and wherein the timing information defines a timing of a cardiac cycle.

32. (New) The apparatus of claim 26, wherein the MRI comprises means for applying one or more electromagnetic radiation bursts based on the timing information.

33. (New) The apparatus of claim 26, wherein the MRI comprises means for applying one or more gradient magnetic fields based on the timing information.

34. (New) An apparatus for performing magnetic resonance imaging using an MRI device (MRI) on a patient having an implantable medical device (IMD), wherein the IMD comprises:

means for stimulating the patient based upon timing information; and
means for ~~communicating~~ transmitting the timing information from the IMD; and wherein the MRI comprises:

means for receiving the ~~stimulation~~ timing information transmitted ~~communicated~~ from the IMD; and

means responsive to receipt of the timing information, for applying MRI electromagnetic radiation to the patient synchronized with the timing ~~information of the stimulation of the patient based upon the received timing information~~, whereby tissue being imaged is placed in a substantially common state during each of the applications of electromagnetic radiation.

35. (New) The apparatus of claim 34, further comprising:

means for sensing conditions of the patient with the IMD;

means for communicating sensing timing information indicative of the sensed conditions to the MRI device; and wherein the MRI comprises:

means for applying the electromagnetic radiation synchronized with the timing information.